REMARKS

Entry of the foregoing and reconsideration of the subject application are respectfully requested in light of the amendments above and the comments which follow.

Claims 1-7 were pending in this application. In this response, claims 1 and 6 have been amended. Thus, claims 1-7 remain pending.

Entry of the forgoing is appropriate pursuant to 37 C.F.R. § 1.116 for at least the following reasons. The amendments remove informalities from the claims, thus presenting the application in better form for appeal.

CLAIM OBJECTIONS

Claims 1 and 6 are objected to because of informalities. The typographical errors in claims 1 and 6 have been corrected. Reconsideration and withdrawal of the rejection is requested.

CLAIM REJECTIONS UNDER 35 U.S.C. §103(a)

Claims 1-7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over DE 3314049 to Grafe (hereafter "*Grafe*") in view of U.S. Patent No. 5,083,887 to Dotany (hereafter "*Dotany*") on the grounds set forth at page 2 of the Official Action. This rejection is respectfully traversed because the proposed combination does not identify all of the claimed features in the present claims and is therefore missing an element. See, M.P.E.P. §§2143-2143.03.

The independent claims at issue here, includes among its features that the active edges of the cutting inserts of the same flute partially overlap each other in imaginary, radially extending overlapping planes. Furthermore, the body includes an even number of flutes and insert rows (in some cases, at least four or two of each type (see, e.g., claim 5)), where the front cutting insert in every second flute has another length than the other cutting inserts in the same flute. That is, neither reference discloses the feature of (1) a first insert having another length than the cutting inserts in the same flute, and (2) that the active cutting edges of the cutting inserts (e.g., first flute and adjacent insert in same flute) partially overlap each other in imaginary, radially extending overlapping planes. This arrangement has been shown to advantageously and unexpected improve performance of the milling tool by, among other things, producing a uniform load on the cutting inserts (see, claims 6 and 7).

In contrast, *Grafe* discloses a tool in which several spiral flutes (3) each have an arrangement of inserts (6 and, in some instances 60) along its length. Within each flute, each of the inserts is separated by a gap (11). One flute (3) includes a front insert (60) that is longer in the axial direction than the other inserts in that row. However, *Grafe* fails to disclose both the feature of a first insert having another length than the cutting inserts in the same flute and the active cutting edge of the first longer insert overlaps that of an adjacent insert.

Dotany does not make up for the foregoing deficiencies of *Grafe*. In contrast, *Dotany* discloses a cutting tool in which cutting inserts are arranged in a helical flute such that the cutting edge of each insert is in overlapping relationship in the axial direction with the cutting edge of the next adjacent insert (Abstract). However, in *Dotany*, the first insert in the first flute does not have another length from the adjacent insert in the same flute. Accordingly, *Dotany* fails to disclose both the feature of first insert having another length than the cutting inserts in the

same flute and the active cutting edge of the first longer insert overlaps that of an adjacent insert. In addition, both *Grafe* and *Dotany* fail to disclose the feature of cutting inserts arranged to subject each to a uniform load. Accordingly, neither *Grafe* nor *Dotany*, in combination or alone, disclose the patentable features of independent Claims 1 and 6.

In addition, one having ordinary skill in the art would not look to the disclosure of *Dotany* for the feature of "active edges of the cutting inserts of the same flute partially overlapping each other". In particular, *Dotany* criticizes a typical prior art device (Fig. 4), that includes four flutes, where inserts are spaced from each other in the same flute, but are staggered, much like the device of *Grafe*. To avoid the drawbacks of the prior art, *Dotany* discloses eliminating one of the rows of the flutes, and aligning the inserts from adjacent flutes (see Fig. 5). Accordingly, one having ordinary skill in the art would recognize that to use overlapping inserts in adjacent flutes, one would need to align inserts with adjacent flutes and eliminate one of the rows of flutes, thereby creating a continuous, non-interrupted cutting line. In contrast, the present invention uses an even number of flutes, so that the first insert pocket has a first overlapping plane axially displaced in relation to an overlapping plane between the cutting inserts in a row of cutting inserts in a second, nearby flute. Accordingly, one having ordinary skill in the art would not combine the references in the manner suggested by the Examiner.

Moreover, adding the feature of "active cutting edges of the cutting inserts of the same flute partially overlap each other in imaginary, radially extending overlapping planes" would destroy the function of *Grafe*. In particular, *Grafe* discloses cutting inserts that are disposed along a particular flute. However, the flutes are designed such that the cutting inserts are attached along the same plane. As such, it would be impossible to make the active cutting edges of the cutting edges in the same flute partially overlap each other along the disclosed flute. The

particular configuration of *Grafe* makes it impossible to do so. Moreover, there is no plausible reason as to why *Grafe* would make such a change. Accordingly, the combination of *Grafe* and *Dotany* would not disclose the features of independent Claims 1 and 6.

Thus, it is respectfully asserted that a *prima facie* case of obviousness has not been established because at least some of the claimed features are lacking from the rejection. Accordingly, withdrawal of the rejection is appropriate.

CONCLUSION

From the foregoing, further and favorable action in the form of a Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed and prosecution of the instant application expedited.

Respectfully submitted,

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